

S8 Table. Dominant behaviors of elephants and behavior definitions.

Dominance behaviors	Definition	Initiator is dominant	Target is dominant
Chase away	An elephant runs toward another elephant, and then returns to the original place (usually family unit) ^{1,2} .	✓	
Displacement	Rapid approach to another elephant and displacement of that elephant from any location (target must move at least one body length). No physical contact ¹ .	✓	
Frightened	An elephant moves suddenly when they see another elephant, and usually moves away deliberately ² .		✓
Intervention	Place own body between an aggressor and a target. Typically exhibited by the matriarch/dominant elephant ¹ .	✓	
Kicking	Kicking at another elephant with front foot or rear foot. Kick may be projected forward with the front foot, to the side, or to the back with the back foot ¹ .	✓	
Play mounting	One elephant mounts another from behind (regardless of sex). Possibly a dominant behavior, or a form of masturbation ¹ .	✓	
Push	Head-to-head, head-to-body or body-to-body forceful contact that results in the	✓	

	target elephant moving. Tusks are not used ¹ .	
Submission	One elephant pushes rump towards another elephant, but not for mating ¹ .	✓
Trunk over body	Placing the trunk on top of another elephant's body, usually from the side ¹ .	✓
Trunk over head	Placing the trunk on top of another elephant's head, usually from the side ¹ .	✓
Trunk over hip	Placing the trunk on top of another elephant's body, usually from behind ¹ .	✓

¹ Definition is cited or modified from Elephant Husbandry Resource Guide-Behavior Management [75].

² Definition is based on routine observation.